NavMed 369

RESTRICTED

NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

Editor - Captain F. W. Farrar. (MC). U.S.N.

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BUREAU OF MEDICINE AND SURGERY
NAVY DEPARTMENT,
WASHINGTON, D.C.

BLDG 20 ROOM 7

New Surgeon General of the U.S. Navy: On 2 December 1946, Rear Admiral C. A. Swanson, Medical Corps, U.S. Navy, was sworn in as Surgeon General of the Navy. He has made this statement which will be of interest to all officers and enlisted personnel of the Medical, Dental, Nurse, and Hospital Corps:

> "At the beginning of a new Surgeon General's term of office, there is a natural interest by all members of the Medical Department in the future policies to be pursued. I hope to express some of these policies in a future short article. At this time, however, I wish to give two things which I regard as fundamental. One is that after the stress and difficulties of the war and the demobilization period there must be a return to a position of greater stability, with less movement of personnel and more attention to a program of orderly succession of duty between sea and shore, of providing better living conditions, and encouragement of professional training. The second is that any improvement in the morale, well-being, and professional knowledge of Medical Department personnel will result in a better attainment of our primary purpose, which is the care of the sick and injured of the Navy in all parts of the world."

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Application of the Physical Properties of Gas to the Treatment of Pulmonary Tuberculosis: An important advance in the treatment of pulmonary tuberculosis, and possibly other diseases, has been achieved by Dr. A. L. Barach of New York City. In 1938, following up the work of Dr. T. Thunberg in 1926, Doctor Barach started using his "equalizing pressure chamber." By means of this device, complete immobilization of both lungs can be achieved, external respiration being accomplished without movement of the chest wall.

In normal respiration the molecules contained in 3000 c.c. of functional residual air remain in the lungs after expiration. With inspiration, by increasing the capacity of the lungs the molecules contained in 500 c.c. of air are brought in to provide replacement for those molecules of oxygen taken out of the air in the lungs by the internal respiration. Next, on expiration, by decreasing the capacity of the lungs, the molecules in 500 c.c. of air are driven out of the lungs. Thus, it is better to consider the gases of external respiration as numbers of molecules rather than as of cubic centimeters of air.

It will be seen that, if the thoracic wall be kept stationary and the volume of air in the lungs constant, the exchange of molecules can be brought about by alternately compressing and decompressing the air. The number of molecules found in 500 c.c. of air at one atmosphere of pressure can be driven into the functional residual air of the lungs by increasing the pressure one-sixth of an atmosphere and then can be drawn off by decreasing the pressure to normal. The internal respiration is not altered, inasmuch as the relative proportions of the gases composing the air do not differ from those found with normal breathing.

The Barach machine has the appearance of a Drinker respirator but differs from it in that the head of the patient is enclosed in a separate compartment rather than in being outside the machine. In operation, the air is driven into the head compartment first, instead of into the body compartment as in a Drinker respirator. The increasing pressure in the head compartment starts a flow of molecules through the tracheobronchial tree into the patient's lungs and also a flow of molecules through an opening into the body compartment. By adjusting the size of the opening into the body compartment, the resistance to the flow of molecules through the tracheobronchial tree can be duplicated in the flow of molecules from the head compartment to the body compartment. Then the pressure in the body compartment and the pressure inside the lungs will rise at an equal rate; and since there is always an equal pressure both inside and outside the thoracic cage, no movement in that cage takes place. The resistance in the tracheobronchial tree has been measured and is found to vary from 4 to 7 cm. of water. This is equivalent to the negative pressure set up in the pleural space during normal respiration.

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The placing of the head and body in connected compartments is the principle which Barach introduced and which gave him success while Thunberg's "barospirator" failed. When the patient is in the operating machine, the pressure is varied through a range of one-sixth atmosphere twenty-five times a minute. Doctor Barach has found that an average period of from 2 to 3 hours is required at first for the patient to accept the machine's work and stop breathing. After that, the patient maintains a perfect exchange of gases without movement in either lung.

Doctor Barach states that the response to local lung rest secured by this procedure is first of all a decrease in temperature and pulse rate, manifested during the first two weeks. Between four and six weeks after inauguration of therapy there is a decrease in cough and expectoration, as well as a definite recognition by the patient of improvement in terms of well-being and loss of malaise. Gain in weight begins, and in a four-month period usually reaches as much as from 20 to 35 pounds in the patient in most cases, even when no previous weight gain with bed rest has occurred. No other special treatment has been provided except for a high vitamin intake and a plentiful supply of protein in the diet. It has been observed that the patient is unable to eat well at first but later begins to increase the amount of food ingested.

The earliest effect on x-ray films appears to be that of an increase in infiltration, frequently observed in the second or third week, which may be in part due to the lessened desire to cough and to some puddling of secretions in the smaller bronchioles with localized atelectasis. However, definite clearing of shadows in x-ray films begins to take place at the end of the second or third month of treatment.

Further, a surprising side effect is noted in that, with the cessation of effort in the respiratory musculature, a calming and relaxation of all voluntary motion is observed. There are periods of from four to five hours in which no movement is observed in the patient. Also, the patient loses the desire to smoke, read, etc., and is perfectly content to lie quietly. After removal from the machine, the patient seems to have learned how to relax better, and enjoy a more complete bed rest. There have been no ill effects observed as a result of this treatment. Discomfort, due to the changing pressure on the ear drums, when troublesome, can be overcome by ear plugs. A patient can be kept in the machine only while awake because with sleep active respiration is resumed. The cardiovascular system is unaffected. No claustrophobia has been observed.

To date, the results recorded by Barach are limited to 11 cases of far advanced tuberculosis not amenable to other forms of therapy. These are summarized in some of his recent articles (A. L. Barach, "Immobilization of Both

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Lungs," Amer. Rev. Tuber. 52:122-144, 1945 and A. L. Barach, "Immobilization of Both Lungs by the Equalizing Pressure Chamber in Pulmonary Tuberculosis," Proc. Amer. Coll. Chest Phys., San Francisco, June 29, 1945.) Of these eleven cases, apparent arrest of the disease occurred in seven, and in four there was slight improvement but no significant change in the course of the disease. (Barach, A. L., "Principles and Practices of Inhalational Therapy," Philadelphia: J. B. Lippincott Company, 1944).

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The Effect of Topically Applied Sodium Fluoride on the Incidence of Dental Caries: Dental research workers in the United States Public Health Service have recently completed a report of findings for the third year of study of the effect of topically applied sodium fluoride on the incidence of dental caries.

In 1942 examinations were made to determine the incidence of dental caries in the permanent teeth of two groups of Minnesota school children who had been selected for participation in a study of fluoride applied topically. The 337 children in the first of these groups then received from 7 to 15 topical applications of 2 per cent sodium fluoride solution to the teeth in the upper and lower left quadrants of the mouth. The second group, consisting of 392 control children, did not receive any applications. Subsequent to 1942, annual examinations of the teeth of both groups of children were made by the same examiner and the incidence of dental caries was recorded. The procedure for treatment with fluoride consisted of isolating the teeth with cotton rolls, drying the teeth with compressed air, and wetting the crown surfaces of the teeth with a 2 per cent sodium fluoride solution. The applied solution was allowed to dry in air for approximately 4 minutes. All treatments were given weekly or bi-weekly during an eight-week period in April and March 1942.

During the 3-year period ending May 1945, the number of permanent teeth initially attacked by caries was 36.7 per cent less in fluoride-treated than in untreated teeth. This percentage difference is somewhat smaller than that observed for the first year after the treatment (39.8 per cent) and for the second year after the treatment (41.4 per cent).

During the third year of study, or the year ending May 1945, the initial caries attack was 22.2 per cent less in fluoride-treated than in untreated permanent teeth. This yearly difference is substantially less than that observed for the second year, 46.6, and for the first year of study, 39.8.

Among permanent teeth which were carious at the beginning of the study in 1942, the number of additional surfaces which became carious during the

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3-year period ending May 1945 was 23.9 per cent less in treated than in untreated carious teeth. The percentage difference observed for the first year of study was 12.4 and for the first 2-year period was 23.1. By individual years of study there were 12.4, 25.2, and 33.1 per cent less newly carious surfaces in fluoride-treated than in untreated carious teeth, for the first, second, and third years, respectively. (Pub. Health Reps., Nov. 22, '46 - Knutson and Armstrong)

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Lymphogranulomatous Strictures of the Rectum: Lymphogranuloma venereum and particularly strictures of the rectum caused by this disease have been the subject of many reports in recent years. It is generally recognized that the anorectal manifestations of this disease (which is worldwide in its distribution) constitute the most serious threat to life and are most difficult to treat satisfactorily. This paper is a study of 476 patients with fibrous inflammatory strictures of the rectum admitted consecutively to Harlem Hospital during the fifteen- and a half-year period from 1 January 1930 to 1 August 1945.

In this series Negro women have been chiefly affected. Some involvements are mild and seem to cure themselves, whereas others progress in spite of all known methods of treatment. It is the authors' opinion that these variations in clinical behavior result from the fact that there are different strains of the virus and that the virus produces a reaction according to the host. The early diagnosis and treatment in all cases is important. In the prestricture stage sulfonamide compounds seem to have some value, but there is a question as to whether sulfonamide drugs can prevent permanently an extension of the processes in some cases. It is likewise true that in some of the instances in which sulfonamide drugs seem to have been of value the evidence is not conclusive as yet that these patients might not have done as well without the sulfonamide compounds as far as checking the activity of the virus is concerned. Sulfonamide drugs do help in clearing up the superimposed secondary infections that are present in these cases and thus improve the condition of the patients clinically. Penicillin has proved valueless in this series of cases.

Some conditions do not progress rapidly and are not serious, but other conditions do progress rapidly in spite of all forms of treatment, with the exception of early excision. Colostomy helps many patients (1) by lessening secondary infection and (2) by overcoming the toxic effects of chronic obstruction of the bowel. Surgical treatment alone is of value once a fibrous stricture of any considerable extent is developed. Warthen's obliteration of the cul-de-sac offers the possibility of lessening the complications that are inherent in colostomies, namely, anterior grade and retrograde herniation. It cannot,

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however, prevent stenosis of the colostomy opening, which occurs in many instances. Pauchet's excision operation or a modification thereof at this time offers the best method of cure for strictures low in the rectum. This does not exclude the sacroperineal excision operation of Hartmann. These operations are of such magnitude that they should be performed only by experienced surgeons. When the disease involves the entire rectum or is high in the rectum, involving the rectosigmoid area, abdominoperineal extirpation is indicated if the patient's clinical condition does not improve after colostomy. In the rare cases in which the descending colon is involved, a permanent artificial anus in the transverse colon should be made. Carcinoma occurs as a superimposed factor in a sufficiently large number of cases to be of clinical significance.

Much further study, both clinical and laboratory, is needed to complete the knowledge and understanding of this subject. (Arch. Surg., Nov. '46 - Wright et al.)

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Attempted Transmission of Acute Leukemia from Man to Man by the Sternal Marrow Route: In this study, sternal marrow material from 3 untreated cases of acute myelogenous leukemia and one case of acute lymphoid leukemia was injected into the sternal marrow of human volunteers with carcinoma of the oral cavities.

No evidence could be detected clinically or hematologically that the implantations of leukemic bone marrow had any effect whatever on the recipients. No abnormal course or complication of the recipients' carcinoma, and no changes in their temperature, lymph nodes, spleen, leukocytes, hemoglobin, or bone marrow which could possibly be attributed to leukemia could be detected during the time of observation. Moreover, in no instance could immature leukocytes be detected in the peripheral blood, nor did the percentage of myelocytes and especially myeloblasts increase in the bone marrow in any of the recipients. The hemoglobin percentages and total leukocyte counts varied slightly, but in every instance secondary deposits of the pre-existing carcinoma undergoing necrosis with sloughing, or other complications such as aspirative pneumonia or hemorrhage, were responsible.

It is obvious that the transmission attempts failed. However much the acute and chronic forms of leukemia differ clinically, both are apparently not transmissible under the circumstances described. Human leukemia resembles very closely the leukemia in mice and birds. In mice, inbred strains are required for successful transmissions, but this is not so for birds. The lack of

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transmissibility of acute human leukemia has its counterpart in animal leukosis. It is an indication that the acute cases are only special forms of the chronic ones. They are different clinical manifestations of the same process appearing at an earlier date with a more rapid course.

The lack of "takes" in the described transmission attempts might be due to several factors such as the different genetic structure of the recipients from the donors, the age group of the recipients, their state of nutrition, and immunity to the implants due to the presence of a cancer. It is to be recalled also that since some virus-like agents, such as the milk factor, have an incubation period of about one-half the lifetime of the animal, it might be necessary to observe for a longer time than the periods recorded here the human subjects into whom leukemic material was injected.

Summary: Acute untreated human leukemia could not be transmitted with cellular sternal marrow by the sternal marrow route from man to man. No further evidence to differentiate acute and chronic leukemia, in spite of their clinical difference, could be brought forward. No evidence of a transmissible virus as cause of acute leukemia in man was detected. (Cancer Research, Dec. '46 - Thiersch)

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Intravenous Injection of Sodium Amytal as a Test for Latent Anxiety: Sodium amytal has been widely utilized in the investigation and treatment of mental disorders. Its effectiveness in probing and clarifying stuporous psychotic states and its value in alleviating major hysteria are examples of its usefulness, which find expression in the routine daily work of most psychiatrists. However, sodium amytal has been little used in the so-called anxiety or tension states, by far the largest category of the psychoneuroses, and it is in this category that its utilization may prove extremely effective.

The bulk of the conditions included under the clinical label of "psychoneurosis" cannot be adequately designated by such descriptively specific diagnoses as conversion hysteria, obsessive-compulsive states, and hypochondriasis. Rather, they must be grouped together on the basis of the broad concept of tension engendered by frustration and insecurity, and are consequently best described as the tension, or anxiety, states. The patterns of anxiety which the human organism may display are diverse, but they can be delimited and the symptoms of each pattern itemized. One such pattern, for example, may be tension expressing itself through the gastro-intestinal tract. Another constellation of symptoms may be derived chiefly from the musculoskeletal system.

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Among the musculoskeletal symptoms of anxiety in an individual patient one might find feelings of "drawing" in the temples, eyes, and neck; severe occipital headaches; a feeling of unsteadiness while walking; and easy fatigability. This pattern of symptoms is not uncommon, is readily diagnosed as an anxiety state, and is recognized as requiring psychotherapy.

Anxiety or tension symptoms, however, are not always readily recognized as such. When they appear in unusual constellations, or when isolated symptoms appear in patients not considered previously psychoneurotic, the origin of the complaints may be in doubt. Any individual anxiety symptom may, therefore, so closely resemble a symptom produced by a truly organic process that differentiation by the usual diagnostic tests may be impossible. So far as the patient's verbalization of this complaint is concerned, there is no significant difference between that of functional and that of organic origin. Nor, indeed, in the patient's awareness is there a difference. The headache resulting from tension in the muscles of the forehead and temples caused by anxiety seems as severe and as incapacitating as the headache produced by increased intracranial pressure. The nausea which accompanies the gastrointestinal pattern of anxiety is as real and sickening to the sufferer as the nausea of intestinal obstruction.

When it proves impossible to determine the existence of an organic basis for the patient's complaint, the physician may turn slowly to the concept of psychoneurotic causation. In most instances, however, the diagnosis of psychoneurosis is one evolved by the exclusion of every potential somatic cause, no matter how remote the likelihood of its presence. This process is often slow, costly and, in the end, unrewarding. The authors feel that it is possible to prove the "nonorganic" origin of many symptoms by a concrete diagnostic test. The test consists in the intravenous administration of small amounts of sodium amytal, injected fairly rapidly. Within from one to five minutes, in most cases, the patient will note a definite abatement of his complaint if it is truly a tension symptom, and often in this astonishingly brief period he will report complete relief. This test has been used on more than 80 patients presenting this confusing problem in diagnosis with frequently gratifying results. This paper constitutes a report on the authors' first series of such cases.

In most instances, the patient's sensorium will in no way be impaired by the injection, but a few patients may manifest drowsiness, confusion, incoordination, or, rarely, excitement. Ambulatory patients should be accompanied by a responsible adult, and adequate means of transportation home should be available in the occasional cases in which these side effects occur.

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The solution of sodium amytal should be freshly prepared, being dissolved in distilled water or in isotonic solution of sodium chloride just before injection. The solution should be clear and colorless; occasionally the authors have encountered a brown or yellow solution, which may be attributed to impurities; such a mixture is discarded. The authors have been accustomed to use a solution containing 1 grain (0.065 Gm.) of sodium amytal in each cubic centimeter of solution, but other proportions are, of course, feasible. In most instances the authors have available, in the syringe, 4-1/2 grains (0.29 Gm.) of the drug. One-half cubic centimeter (1/2 grain [0.032 Gm.]) of the solution is injected rapidly, and during the next thirty or forty seconds the patient is asked whether any improvement has been noted. There is usually no noticeable effect from this small amount, but occasionally the patient will report a definite degree of relief. Another 0.5 c.c. is then injected, followed by questioning as to the extent of relief; and about one minute after the injection is started, the third 0.5 c.c. is given.

Usually 1.5 c.c. (1-1/2 grains [0.097 Gm.]) is sufficient to produce significant relief; yet such an amount is so small that no drowsiness is evident, and no true analgesia can be said to have been produced. If the mitigation of the complaint is pronounced, no additional amytal is given. If the amelioration is only partial, however, it may be desirable to administer further portions of the drug, evaluating the persistence of symptoms as the injection continues and having in mind that as the total dose mounts many obscuring factors enter the picture.

Whether in the hospital or at home, the patient is observed carefully after the test to determine the interval of freedom from his symptoms.

Conclusions: 1. Anxiety or tension states may give rise to symptoms referable to many systems of the body, even in patients not considered psychoneurotic.

2. Symptoms due to organic disease may be exacerbated because of tension.

3. Sodium amytal in average doses of 1-1/2 grains (0.097 Gm.) given intravenously will frequently relieve a symptom which is entirely due to tension within from one to five minutes.

4. The same amount of sodium amytal will relieve that portion of the symptom due to tension in instances in which tensional pain is superimposed on pain of organic cause.

5. Sodium amytal in small doses can be used as a diagnostic test to separate symptoms of organic disease from tension symptoms.

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6. The test should be used only to supplement thorough physical and psychiatric investigation.

(Arch. Neurol. and Psychiat., Nov. '46 - Susselman et al.)

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Reenforcing or "Booster" Injection of Pertussis Vaccine in Previously Immunized Children of Kindergarten Age: Immune response as measured by the opsonocytophagic reaction was studied in a group of 187 children before and after a stimulating injection of plain pertussis vaccine given at the time of entry into kindergarten.

Tests before the "booster" dose suggested that a moderately high level of opsonic activity was maintained for as long as four years after primary immunization with the three antigens used.

Tests after the "booster" injection showed reactions on the average 1.6 times those before the injection, and the average increased from the moderate range to that of strong reaction.

The results lend experimental support to the policy of giving a "booster" injection of pertussis vaccine to children just before they start to school, since at school the likelihood of exposure to whooping cough is greatly increased. (Am. J. Dis. Child., Oct. '46 - Kendrick et al.)

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Improvement of Ability of Soldier to Work in Humid Heat: The results of studies carried out by investigators for the Office of the Surgeon General of the U.S. Army have led to the following primary conclusions:

(1) The phenomenon of acclimatization to heat is a function of adrenal cortical activity.

(2) The ability of man to acclimatize to heat can be suppressed by pretreatment with exogenous adrenal cortical hormones. Such treatment places the adrenal cortices in a state of relative functional inactivity.

(3) Negative nitrogen equilibrium is a characteristic accompaniment of the process of acclimation to heat. This occurs at a time when the salt content of sweat and of urine are falling sharply. Similar phenomena are observed in normal animals receiving large doses of adrenal cortical extract.

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(4) Desoxycorticosterone acetate injected into normal unacclimatized men produces a sharp fall in the concentration of salt of sweat. The resulting levels are those found in fully acclimatized men.

(5) The concentration of salt in the sweat of fully acclimatized men is directly related to the level of salt intake.

(6) Fully acclimatized men performing hard work in tropical heat (sufficient to produce from 6 to 10 liters of sweat per day) are able to reduce the concentration of salt in the sweat sufficiently to maintain salt equilibrium safely on an intake of from 10 to 15 Gm. of NaCl per day. Under these conditions salt supplements are unnecessary.

(7) Unacclimatized men exposed to hard work in the tropics require salt supplements until acclimatization is complete (about two weeks).

(8) Variations in the protein content of the diet (between 75 Gm. and 150 Gm. per day) do not alter significantly man's ability to perform hard work in a tropical environment.

Present investigations are directed toward ways and means of selecting, by simple measurement, those unacclimatized men who will acclimatize well from those who will not. Extensive studies are under way to establish baseline levels in unacclimatized men. Sweat collected simultaneously from multiple areas of the body by a simple technic indicate (1) variations in the concentration of Na, Cl and N from different areas in a given individual, (2) a similar pattern of variation from one individual to the next, (3) significant differences between "resting sweat" and "working sweat." (Quarterly Progress Report, Oct. '46, Res. Contract No. W-49-007-MD-326 - Conn and Johnston)

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Trenchfoot: From studies carried out in rabbits, Lange and co-workers of the New York Medical College under a contract with the office of the Surgeon General of the U.S. Army have reached the following conclusions:

(1) Complete interruption of circulation in the exposed part as seen regularly in frostbite during exposure does not take place in trenchfoot. This is indicated by the massive edema and a positive fluorescein test during the exposure.

(2) The hyperemic phase following the exposure is milder and more prolonged in trenchfoot than in frostbite.

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(3) Increased capillary permeability in trenchfoot is not so extensive as in frostbite and the edema formed is resorbed more readily.

(4) Vascular occlusion due to trenchfoot is extremely rare and if present is patchy and rarely lends to extensive gangrene.

(5) Muscular function is damaged but little in trenchfoot; however, stiffness and occasional complete ankylosis of the joints in the exposed limb occur.

One hind leg of each rabbit used in the experiments was exposed for at least 4 days to running water at from 1° to 4° C. The skin of the exposed limbs seemed to be extremely susceptible to lesions due to trauma and infection. Death of a rabbit, if it occurred during the exposure, was due to the lowering of the body temperature, from which resulted anoxia of the brain and myocardium. (Quarterly Progress Report No. 5, Oct. 1, '46, U. S. Army Contract No. 000.8)

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Abstracts of Reports on Research Projects:

X-535
Rep. No. 8
24 Oct '46

A Comparison of the Effectiveness of Several Molluscicides Against Different Species of Snails.

An earlier report of laboratory tests indicated that combined mosquito and snail control is possible with materials and equipment ordinarily used in the field for mosquito control operations alone. Since the actual intermediate hosts of human schistosomiasis were not available in sufficient numbers at the time of the earlier observations to be used for the screening tests, the preparations were evaluated against a local snail, Physa acuta. Subsequent increases in laboratory stocks made it possible to assess the effect of these preparations on the snails, Australorbis glabratus and Oncomalania nosophora, both vectors of human schistosomes. Tests were made to determine whether preparations lethal to P. acuta would be equally toxic to these snails.

The following agents were found to be lethal in practical field concentrations against nonschistosome-bearing snails: Diesel oil, cresyl-Diesel oil solution, and phemerol-Diesel oil emulsion. However, they were not effective against schistosome-bearing snails unless used in high concentrations. The addition of copper sulfate (6-8 p.p.m.) rendered the agents lethal in practical field concentrations against all snails tested. Although copper sulfate alone (4-6 p.p.m.) was capable of killing the snails under laboratory conditions, the addition of other

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X-535 (Cont.)

agents was required for the effective action of copper sulfate under field conditions.

Immature snails and newly laid eggs usually were killed at lower concentrations of the preparations than that concentration required to kill mature snails. (Nav. Med. Res. Inst., Bethesda, Md. - Stirewalt and Kuntz)

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NMRI-166
30 Sep '46

Agglutination of Endamoeba Histolytica Cysts.

The present investigation began as an attempt to demonstrate agglutinins for the cultured cysts of Endamoeba histolytica in the sera of carriers.

Agglutination tests were performed as follows: 0.02 ml. of cyst suspension (thoroughly shaken) and 0.02 ml. of serum were mixed on a well slide. The slide was then placed in a Petri dish containing moist filter paper and incubated at 37° C. for from 1/2 to 2 hours with gentle agitation every 15 minutes. The slide was shaken vigorously before each microscopic examination. A saline control and a serum known to agglutinate cysts were included with each group of unknown sera tested. Agglutination, when present, was marked at the end of two hours, but proceeded still further when the slide was kept at 4° C. for from eight to ten hours thereafter. More rapid results were obtained when a Kline rotating type automatic shaker was used.

To determine whether the agglutination was a bacterial adsorption phenomenon, a 1:4 serum dilution was incubated for 12 hours at 37° C. with each of two heavy suspensions of organisms cultured from cyst tubes and killed by heat and formolization.

The results showed that agglutination of the cysts of E. histolytica obtained by culture occurs in dilutions of certain fresh sera of the blood of man and of the horse.

Judging from the few cases studied, there appears to be no correlation of this agglutination phenomenon with either infection with E. histolytica or complement fixing properties of a serum. Further investigation of the problem seems indicated. (Nav. Med. Res. Inst., Bethesda, Md. - Greif)

Note: Those interested in seeing copies of the complete reports should address their request to the Research Division, BuMed.

Opinions or conclusions contained in these reports are those of the authors. They are not to be construed as necessarily reflecting the views or the

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endorsement of the Navy Department. Reference may be made to those reports marked "Not Restricted" in the same way as to published articles noting authors, title, source, date, project number, and report number. No part of the content of RESTRICTED reports may be published, reproduced, or referred to in articles for publication without permission obtained through the Bureau of Medicine and Surgery.

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Postgraduate Training: The Training Branch of the Professional Division has made announcements from time to time in the Bumed News Letter regarding vacancies in various specialties. There now exists an acute shortage of medical officers under training in Pathology and Urology. Requests are desired from medical officers for training in these specialties. Requests should be in the form announced in the Bumed News Letter dated 24 May 1946, and may be made by dispatch. (Professional Div., BuMed)

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Changes to be Made in Copies of Manual of the Medical Department: Certain changes in the Manual of the Medical Department have been directed as specified in Circular Letter 46-177, page 23.

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Opportunities for Full-Time and Part-Time Active Duty for Reserve Medical Officers and Pharmacists:

Full-Time Active Duty. The attention of Reserve medical officers and of pharmacists is invited to the opportunity to perform full-time active duty at one of the major naval air stations of the Naval Air Reserve Training Command or at one of the Naval Air Reserve Training Units (NARTU's) listed as follows:

Present Vacancies (M.O.)	(H.C.)	Location
1	0	NAS, Atlanta, Ga.
1	1	NAS, Columbus, Ohio
1	0	NAS, Dallas, Texas
1	0	NAS, Glenview, Ill.
2	0	NAS, Grosse Ile, Mich.
0	0	NAS, Los Alamitos, Calif.
1	0	NAS, Memphis, Tenn.
2	0	NAS, Minneapolis, Minn.
2	1	NAS, New Orleans, La.
1	0	NAS, New York, N.Y.
0	0	NAS, Oakland, Calif.
2	1	NAS, Olathe, Kansas
2	1	NAS, Squantum, Mass.
2	1	NAS, St. Louis, Mo.
1	0	NAS, Willow Grove, Pa.
		Naval Air Reserve Training Units based at
1	0	NAS, Anacostia, D.C.
1	0	NAS, Jacksonville, Fla.
1	0	NAS, Miami, Fla.
0	0	NAS, Norfolk, Va.
1	0	NAS, San Diego, Calif.
1	0	NAS, Seattle, Wash.

Reserve medical officers and pharmacists who are interested in full-time active duty as a member of the stationkeeper staff at one of the stations or units listed above should initiate letters to the Bureau of Naval Personnel, via the Chief of Naval Air Reserve Training, Naval Air Station, Glenview, Illinois, and BuMed, listing three or four stations at which duty is desired in order of preference. Those Reserve medical officers who may desire full-time duty with one of the listed NARTU's must be flight surgeons or qualified aviation medical examiners. Personnel are desired in ranks not above that of commander in the Medical Corps.

Officers qualifying for the above billets are advised that every effort will be made to continue them in their assignments consistent with the needs of the Service. Certain of the above billets carry orders to duty involving flying for designated naval flight surgeons. Government quarters are available at many of the major naval air stations.

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Part-Time Duty. Naval flight surgeons and qualified aviation medical examiners of the Reserve who wish to affiliate themselves with either the Organized or Volunteer components of the Inactive Reserve composed of Naval and Marine air groups training at one of the Naval air stations or NARTU's listed should contact the Commanding Officer of the station or the NARTU at which the training unit is based. (Personnel Div., BuMed)

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(Not Restricted)

Reserve Medical Officers Needed for Combat Air Group Training Course: Reserve Medical Officers will be needed for a two weeks' training course of Navy and Marine combat air groups of the Naval and Marine Air Reserve Training Commands. It is anticipated that the first of these periods will occur in the month of June, 1947. Interested officers below the rank of Captain are invited to communicate with the Staff Medical Officer of CNAResTra, NAS, Glenview, Ill., stating geographic area where duty is desired, and the date which will be most convenient to attend. (Personnel Div., BuMed)

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(Not Restricted)

Master of Science Degree for Dental Officers: University graduate courses for the degree of Master of Science are now available to dental officers of the Navy. Anatomy, Bacteriology, Pathology, Physiology, Pharmacology, and Biochemistry constitute the required courses for this Master's degree. One of the objects of offering the opportunity for obtaining this degree is to enable the dental officer to obtain a broader background in the scientific foundations of dentistry.

The minimum requirements for this degree are thirty semester-hour credits of which twenty-four hours must be allotted to course work and six hours to research and thesis. This will take about one year of full-time work, or two years of part-time work.

It is desirable that candidates for the Master's degree already have a Bachelor's degree; however, those who have just the Degree of Doctor of Dental Surgery are also eligible.

The selection of officers for these courses of study will be made by a postgraduate board on the basis of existing records in the Navy Department. (Dental Div., BuMed)

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(Not Restricted)

Public Health Foreign Reports:

Disease	Location	Date	No. of Cases
Cholera	Burma, Moulmein	Oct. 26-Nov. 2, '46	37
	China, Cheking Prov., Wenchow	Oct. 1-20, '46	174 (14 fatal)
Plague	Bechuanaland,	(date report)	
	Nganiland, Sehitwa	Nov. 25, '46	2 (1 fatal)
	Nokanen	up to Oct. 22, '46	9 (9 fatal)
	Ecuador, Loja Prov., Celica County, Pindal	October '46	13 (1 fatal)
Smallpox	China, Hong Kong	Oct. 26-Nov. 16, '46	482 (237 fatal)
	Straits Settlement, Penang	Nov. 7-15, '46	56
(alastrim)	Venezuela, Sucre State	Nov. 10-16, '46	395
Typhus Fever	Ecuador	October '46	89 (6 fatal)
	Guatemala	September '46	74 (6 fatal)
	Mexico	(September '46	107
		(October '46	197
	Peru	September '46	88
Yellow Fever	Ivory Coast, Seguela	(date report) Nov. 16, '46	1 (suspected)

(Pub. Health Reps., Dec. 6 and 13, '46)

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(Not Restricted)

Reporting of Dental Treatment for Unofficial Persons: The attention of all dental officers is invited to the provisions of paragraph 5112.4, Manual of the Medical Department which require:

"Whenever dental treatment, not officially authorized, is undertaken for humanitarian reasons, a detailed statement of all the facts pertaining to each case shall be attached to the NavMed-K (par. 1325.1)."

(Not Restricted)

It is desired that this statement be in the form of a letter report attached to the current NavMed-K, and that it include the following detailed information:

a. Name of patient

b. Status of patient. Examples: - civilian employee, daughter of PhM3c, mother of CMM, wife of Lt. Comdr. (SC), USN

c. Description of treatment. Examples: - 5-DO-Cem.T., 14-MO-Sed. (ZnO & Eug.), 29-A.R.-Ex., 32-Pcr.Tr., 9-D-Cem.S., 30-DO-Am.

(Dental Div., BuMed)

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ALNAV 632 19 December 1946 (Not Restricted)

Subj: Changes in Transfer to USN

This Alnav refers to the regulations to govern the transfer of Reserve and temporary officers of the Navy and the Marine Corps pursuant to Public Law Number 347 approved 10 May 1946. Change Number 3 approved 11 December 1946 increases the age limits in all ranks by three years for officers applying for transfer in the Medical, Dental, Hospital, and Medical Allied Sciences Corps, and officers applying for transfer as legal specialists. For officers in the above categories the requirement that an application must be submitted within six months from release to inactive duty or resignation is cancelled. Officers who are now eligible for transfer under the increased age limits will not lose precedence as a result of having been on inactive duty provided they apply for transfer prior to 1 March 1947. All Commands and all Reserve activities are directed to give this wide publicity.

--SecNav. James Forrestal

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(Not Restricted)
18 November 1946

To: All Stations Continental
(Copy to: All Ships and Stations Via
NAVY DEPARTMENT BULLETIN)

Subj: Large-Scale Dispersal of Insecticides, Justification for

Ref: (a) BuMed ltr. BuMed-Y-MAR, L8-2/P2-3, of 11 June 1945, to BuAer, Comdts NavDists (Continental).

Enc.: (A) Present status of airplane application of DDT (restricted).

1. By reference (a) the Bureau of Medicine and Surgery called attention to the possible deleterious effects of large-scale dispersal of DDT and requested that addressees submit requests for airplane dispersal of insecticides to the Bureau of Medicine and Surgery for coordination, technical advice, and recommendations. As DDT became more readily available, requests for airplane dispersal increased. It now becomes necessary, in order to facilitate adequate consideration, to promulgate certain necessary limitations and outline the information required before requests can be considered and final action taken.

2. Enclosure (A) contains information regarding the present status of airplane application of DDT for insect control, for guidance of activities contemplating this measure. Careful consideration should be given the subject matter of enclosure (A) before requests for aircraft dispersal of DDT are submitted.

3. All requests for approval of aircraft dispersal of DDT should be forwarded to the Deputy Chief of Naval Operations (Air) via the Bureau of Medicine and Surgery. The following points should be covered before requests for aircraft dispersal of DDT can be considered for approval:

(a) Operations for control of insects of medical importance in areas adjacent to naval reservations are the responsibility of the U.S. Public Health Service. Naval aircraft will not be approved for this purpose except in an emergency or for controlled research purposes.

(b) Information giving the location, size, and description of the proposed area to be sprayed is required, including topographic or aerial maps, types of vegetation, weather conditions, and average wind velocity.

(c) Data provided by a preliminary survey by qualified entomologists and biologists indicating nature and magnitude of the insect problem present, possible importance in disease transmission, possibility of damage to plant or animal life from the proposed operation.

(d) List insect pests and disease vectors of major importance for which airplane spraying with DDT is practical. Give the estimated population density of each, and the method of evaluation used.

(Not Restricted)

(e) Give any other pertinent and useful information such as man-hours lost and operations delayed or prevented due to insect activity.

(f) Give all available data regarding prevalence of malaria in surrounding civilian community. Refer to reports and maps of the U.S. Public Health Service, Malaria Control in War Areas, and local health authorities.

(g) Description of other insect-control measures carried out or proposed for the same area, and feasibility of the best available ground methods of control.

(h) Availability of aircraft and trained, experienced pilots.

(i) Where area to be sprayed borders on or includes civilian-owned land, all property owners must be contacted and their permission obtained.

(j) Contacts with the following local organizations should be made with reference to the advisability of spraying the area: Representatives of the U.S. Department of Agriculture, Bureau of Entomology and Plant Quarantine; U.S. Public Health Service; State public health service and local health authorities; State entomologist; and the Fish and Wildlife Service, as allied interested organizations.

—OpNav. Ernest W. Litch.

Enclosure (A)

PRESENT STATUS OF AIRPLANE APPLICATION OF DDT (RESTRICTED)

1. In wartime in foreign areas, aerial insecticiding is easily justified where preliminary surveys are unavailable or impractical and the taking and holding of advanced positions may be affected by insect pests and/or insect-borne diseases. In peacetime, however, consideration must be given to its possible harmful effects on beneficial insects, fish, wildlife, and agricultural crops. Evaluation must be made as to whether the expected results will justify the additional expense and risk involved over the use of other efficacious methods of insect control.

2. DDT is not an all-purpose insecticide, as it is of little value against many insect pests. Aerial insecticiding should be directed against mosquitoes, only occasionally against flies and other disease-carrying or pest insects. There are many limitations to be considered such as ground cover, which controls penetration to the exact spot desired; weather conditions (aerial spraying should be accomplished when the winds are in the best direction and have a velocity of less than 10 mph); time of application (there are many points in favor of both "dawn-spray" and "dusk-spray"); availability of an experienced pilot properly trained who can fly at accurate swath intervals (close cooperation of aerial and ground crews and coordination of action by pilot and entomologist are of great importance); and proper maintenance of all apparatus (corrosive substances are being used and extreme changes in flow rate may affect coverage).

(Not Restricted)

3. Although little if any direct damage is related to controlled use of DDT when dispersed by planes, indirect damages are worthy of careful consideration. DDT toxicity as carried by milk from cattle which have eaten excessive and regular amounts of DDT on forage crops has been reported. Poultry have been killed from eating insects which were poisoned by DDT. The possibility of pollen carrying DDT to hives of bees and affecting bee reproduction is being investigated. No effect on bees is considered evident on carefully supervised spraying projects. Insectivorous birds have been reported to move their feeding grounds when available food supplies were affected by DDT in excessive amounts. The concentration and dosages of DDT which are safe for use against all forms of wildlife are not known. Nothing is known of the possible effect on the commercial shellfish industry. Considerable concern is felt over repeated applications of dosages which in single application have not been a serious hazard to other forms of wildlife tested. In this connection, in Circular 11 of the Fish and Wildlife Service, Department of the Interior, dated 1946, Cottam and Higgins stated "The 117-acre tract sprayed with DDT oil solution at the rate of 2 pounds of DDT per acre on June 5 included 9/10 of a mile of the Patuxent River, usually a muddy stream with a flow of about 130 cubic feet a second. Nine and one-half hours after the spraying, 95 dead fishes were removed from a net stretched across the stream at the lower end of the sprayed section. Fish drifted into the stop net for 4 days after the spraying of the river, but the greatest losses occurred within the first 48 hours. . . .In one drained pond that had been sprayed with 0.1 pound to the acre, there was a loss of 43 percent among all species."

4. In general, BuMed does not feel justified in recommending the application of DDT over civilian areas because of the hazards involved, and in this connection, a restricted opinion of the Judge Advocate General's Office stated that "In view of the experimental stage in which DDT is at present. . .with injury or death allegedly having occurred in cases of domesticated animals under certain conditions, as well as in cases of beneficial wildlife of various classes, it would appear that use of this poisonous agent over civilian areas would be difficult to justify as a beneficial employment of naval facilities except in an emergency." Another statement reads, "without prior reference to the Secretary of the Navy, public property in the custody of the Naval Establishment may not be used for the purpose of some other part of the Government or of States, municipalities, or private persons except in emergencies, which are provided for in article 83, Navy Regulations." For the above reasons, use of naval equipment and supplies for airplane spraying over civilian areas will not be undertaken without prior approval. Approval cannot be recommended except in serious emergencies, if any doubt exists as to possible damage to civilian crops or farm animals.

5. Certain limitations are imposed on DDT aerial dispersal in those areas where open water reservoirs and open water storage-purification plants are in operation. Coagulation-flocculation method of water purification will remove most of the DDT in water. Although expensive to use, activated carbon will effect 100 percent removal of DDT from water.

(Not Restricted)

6. Two types of kill are related to aerial dispersal--airborne-droplet kill and residual kill. In airborne-droplet kill, stimulation of the insect population causes flying and increased droplet contact which results in a quicker kill. This may last for 1 hour following spraying. In residual kill, the kill by the residue which remains after drying of the spray is hard to evaluate. It is considered from present studies that little residual kill is to be expected from aerial spraying.

7. In aircraft dispersal, DDT will not be dispersed at a greater rate than 0.3 pound per acre.

8. There is good reason to expect valuable control to result from proper application of DDT by airplane against such diseases as are transmitted by out-of-doors mosquitoes. There is less likelihood of good larval mosquito control from airplane application against such mosquitoes as breed in cisterns, rain barrels, etc., and live inside human habitations (e.g., Aedes egypti), or those that breed in sewage effluent (common Culex pest mosquitoes). While a fair degree of adult kill will result, larval control is much less satisfactory than that obtained against anophelines. Control of flies by airplane spraying of DDT is most transient because the adult flies in the open are the only ones affected. Larvae, pupae, and adults inside buildings are not killed. There is no evidence that spraying of DDT from aircraft is of any value in reducing the incidence of poliomyelitis in an epidemic of that disease.

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Circular Letter 46-177 12 December 1946 (Not Restricted)

To: All Ships and Stations

Subj: Instructions for Administering Pseudo-Isochromatic Plates, American Optical Company, First Edition, Abridged.

Encl: 1. (HW) Subject instructions for insertion in the American Optical Company's Pseudo-Isochromatic Plates book.

1. Certain plates in the first edition of the American Optical Company pseudo-isochromatic plates have low diagnostic value or are misleading in interpretation. Sheets of black paper are to be pasted over the following plates in the standard edition of the American Optical Company Pseudo-Isochromatic Plates for Testing Color Perception:

(Not Restricted)

PLATES TO BE DELETED:

Plate No.	Normal Reading	Plate No.	Normal Reading	Plate No.	Normal Reading
1	89	15	7	31	52
2	43	16	9	32	96
3	56	17	25	33	No
4	27	18	68	34	No
5	8	22	34	37	052
7	39	26	H	38	394
11	29	28	43	39	23
13	86	30	75	45	No

2. The normal responses for the remaining plates should be checked from the following list. Only these plates will be used for testing color vision.

PLATES TO BE USED:

Plate No.	Normal Reading	Plate No.	Normal Reading	Plate No.	Normal Reading
6	6	21	97	36	follow
8	42	23	56	40	65
9	56	24	27	41	15
10	27	25*	12	42	74
12	57	27	89	43	47
14	75	29	86	44	98
19	5	35	follow	46*	follow
20	3				

*Demonstration Plates

3. When the above procedure has been executed, this letter should be filed where it is not accessible for memorization by applicants but will be available for rechecking if necessary.

4. (a) Applicants for enlistments and reenlistments in all branches of the Navy and Marine Corps shall be required to pass satisfactorily the abbreviated pseudo-isochromatic plate test with not more than five errors. In the case of enlisted men who fail to pass the test upon examination for reenlistment, a waiver shall be submitted to the Bureau stating all the facts.

(b) Candidates for entrance into the U.S. Naval Academy and for all primary appointments to the commissioned branches of the Navy and Marine Corps shall be required to pass satisfactorily the abbreviated pseudo-isochromatic plate test with not more than three errors.

(Not Restricted)

5. Enclosure 1. will be pasted in the front of the AO Pseudo-Isochromatic Plates book.

6. In view of the above, the Manual of the Medical Department is modified as follows:

(a) Delete present Paragraph 2125.1, and substitute the following:

> Determination of Color Perception--2125.1. Applicants for enlistment and reenlistment in all Branches of the Navy and Marine Corps and of the Naval Reserve and Marine Corps Reserve shall be required to read correctly any 15 of the 20 plates of the revised First Edition of the American Optical Company Pseudo-Isochromatic Plates for Testing Color Perception, 1940, (Demonstration Plates excluded).

(b) Delete present Paragraph 2125.2, and substitute the following:

> 2125.2. The test shall be conducted in accordance with the instructions contained in the revised First Edition, AOC Chart Book, 1940, currently approved by the Surgeon General.

(c) Delete present Paragraph 2125.3, and substitute the following:

> 2125.3. The following personnel shall be required to read correctly any 17 of the 20 plates of the revised First Edition, AOC Chart Book, 1940, (Demonstration Plates excluded): Candidates for primary appointment to commission or warrant rank, nurses, candidates for entrance to the Naval Academy, candidates for training leading to the designation of Naval Aviator or Naval Aviation Pilot.

(d) Delete present Paragraph 2125.4, and substitute the following:

> 2125.4. Enlisted candidates for special duties requiring a higher degree of color perception than is required for original enlistment shall be considered to have normal color perception, if they read correctly any 17 of the 20 plates of the revised First Edition, AOC, Chart Book, 1940 (Demonstration Plates excluded).

--BuMed. C. A. SWANSON

(Not Restricted)

INSTRUCTIONS

FOR ADMINISTERING PSEUDO-ISOCHROMATIC PLATES,

AMERICAN OPTICAL COMPANY, FIRST EDITION, ABRIDGED

1. Lighting: The plates must be illuminated by a Macbeth Daylight lamp or its equivalent, or by diffused daylight which consists largely of skylight. Direct sunlight or ordinary incandescent light must not be allowed to fall on the plates during the test. The book should be set in a holder at such an angle that the plates are well illuminated and free of shadows or of reflected glare.

2. Distance: Plates should be displayed at a distance of approximately two (2) to three (3) feet from the applicant's eyes.

3. Timing: The pages of the chart should be turned fairly rapidly, exposing each for from two to three seconds. If the applicant hesitates he should be asked to read the plate right away or admit that he sees no definite number.

4. Procedure: The applicant should be asked to "Read the numbers". The demonstration chart #25 which exhibits a figure "12" should be shown first, the remainder in random order. Do not allow the applicant to trace the numbers, or tilt the chart, or look at them from different angles.

5. Line Tracing Charts: If the applicant is illiterate or if the examiner suspects malingering, the line tracing charts should be used, first showing the demonstration plate #46. Use a brush or rubber tipped pencil; never permit finger tracing or the plates will be ruined as tests.

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Circular Letter 46-178 12 December 1946 (Not Restricted)

To: All Ships

Subj: Medical Department Allotments, Fiscal Year 1947.

Refs: (a) General Order No. 235, dated 2 May 1946.
(b) Part VI, Manual of the Medical Department.
(c) BuMed CirLtr 45-142, 5 June 1945, (ND Bulletin, Item 45-642).
(d) Article 1194, US Navy Regulations.
(e) BuMed CirLtr, L1-2/EN10(073), 7 July 1945 (ND Bulletin, Item 5-801).

1. Effective 1 January 1947 Annual Medical Department allotment for the fiscal year 1947 is provided for each vessel in commission as follows:

(Not Restricted)

FY 1947 ALLOTMENTS

Category	MedDept Allotment Active Fleet	Category	MedDept Allotment Active Fleet
BB	$ 360	AP	$ 360
CA	240	APA	360
CL	240	AR	300
CV	480	ARG	300
CVB	540	ARH	300
CVL	-	ARG	240
CVE	120	AS	300
CM	72	AV	360
AD	300	AVP	60
AG	-	AVS	60
AGC	420	LSD	60
AKA	60	LSV	60
AO	36	ABSD	240

NOTE: Allotments will not be granted to ships of the Reserve Fleets.

For each category of ship having a prosthetic dental laboratory the allotment is increased by $240.00 per year.

2. The above indicated amounts are funds available for the procurement of necessary professional and technical materials for the Medical Department. A sum equal to 20 per cent of each allotment shall be set aside for the exclusive use of the Dental Department in those ships where one or more dental officers are attached. Funds set aside for the Dental Department are for the procurement of materials and services, including laundry service, ordinarily obtained under Medical Department allotments and obligations will be made upon the signature of the Dental Officer. The Medical Department Property and Accounting Representative will confer with the Dental Officer for the purpose of: (1) Reporting the amount of allotment designated for the dental department; (2) Receiving such financial statements as are necessary from the dental department for incorporation into all financial reports to BuMed.

3. By separate correspondence the Bureau will promulgate instructions regarding other financial and property reporting responsibility of the Medical Department and Dental Department.

4. The amounts indicated under Medical Department allotment in paragraph 1 constitute allotments of the appropriation Medical Department, Navy to each vessel in the respective classes. Each allotment is divisible into four equal quarterly apportionments and the availability for obligation is limited to this apportionment plus any savings from previous quarters. Only one-half of the above amounts are available during fiscal year 1947. An allotment card will not be issued. Ships commissioned during the fiscal year will be granted

(Not Restricted)

automatically, without further reference to this Bureau, a prorata share of the annual allotment. (e.g., A "CV" vessel commissioned during the first quarter would receive a full year's allotment. If commissioned during the second quarter, the vessel would receive 3/4 of the annual allotment, etc.). Requests for allotment changes will be governed by paragraph 5 of reference (c). Allotment numbers will not be assigned to ships. In making requests for changes in allotment, the name of the appropriation (Medical Department, Navy) shall be stated, together with the fiscal year and the quarterly period in which change is desired.

5. It will be noted, in paragraph 1, that there are no medical supply depot credits established. Inasmuch as the Materiel Division, Bureau of Medicine and Surgery, has set up a system for recording and reporting all issues of medical supplies by medical supply depots and storehouses to ships and shore stations, it will not be necessary to grant medical supply depot credits. Current directives govern the quantities of medical supplies to be carried in stock by ships and shore stations.

6. For fiscal year 1947 these instructions do not apply to hospital ships. The amount granted will be based upon individual letter requests from such ships. These letter requests shall indicate separately the medical and dental requirements under each subobject, and shall be submitted to BuMed at the earliest practicable date.

7. Certain types of small vessels rarely require medical stores other than those listed in the BuMed section of the Catalog of Navy Material. It is intended that such vessels will be furnished necessary medical stores by the shore stations, base, tender, or larger vessel to which regularly or temporarily assigned for operations or other purpose. During periods in transit or on detached service, such vessels may obtain medical stores from any naval Medical Department activities, in the following order of preference: (1) Shore Stations or bases regularly supplying similar vessels; (2) any shore station or base; (3) any NavMedSupDep or storehouse; (4) other ships. Activities receiving such requests are directed to issue such essential medical stores as may be so requested. Shore activities located at ports where such vessels frequently call shall be prepared to render this service.

8. Medicines and civilian medical, dental, nursing, and hospital services which may be required in an emergency, for naval personnel attached to ships with or without allotments may be acquired in accordance with paragraph 3045 Manual of the Medical Department. Requisitions for civilian medical, dental, nursing, and hospital services, for ships operating outside the continental limits, shall be prepared in accordance with paragraph 3034 Manual of the Medical Department. All such expenditures are chargeable to the ship's allotment. Prompt report on NavMed Form U shall be made in accordance with paragraph 318 Manual of the Medical Department, in every case, whether or not a requisition is used.

(Not Restricted)

9. Vessels listed in paragraph 1 shall prepare and submit an annual sundry purchase requisition (NavSandA form 44 and 44a). Attention is invited to paragraph 3033 of ref (b) for instructions.

10. Property accountability for vessels with or without allotment shall be maintained on board in the usual manner and as prescribed in refs (b) and (d) except that the preparation and submission of NavMed B and E will not be required. However, a letter informing the Bureau relative to the Status of the allotment and expenditures incurred will be required at the end of each quarter. The information required is as follows:

Status of allotment, quarter ended_____

		Dental	Medical	Total
1.	Quarterly apportionment	$	$	$
2.	Increase granted by the Bureau			
3.	Savings from previous quarter			
4.	Total available for expenditure	$	$	$
5.	Expenditures during quarter			
6.	Savings carried forward to next qtr.	$	$	$
7.	Expenditures by subobjects: (List subobjects and amounts, as to medical and dental)	Dental	Medical	Total

Remarks:

NOTE:
1. The quarterly apportionment is one-fourth the amount shown in paragraph 1 above.
2. Increase granted by Bureau. In the event an increase is actually required and the Bureau's authorization has not been received, record the amount requested on this line and state circumstances under "remarks".
3. Savings from previous quarter. The first quarter report will indicate "none".
4. Total available for expenditure is the total reported on line 1, 2 and 3.
5. Expenditures during quarter. Report total expenditures and obligations incurred against the appropriation 1771102, MDN, 1947, during the quarter.

(Not Restricted)

6. Savings carried forward to next quarter. Report this amount on line 3 of succeeding quarterly report except that the amount reported on this line of fourth quarter report will revert to the Bureau and is not available to the ship for expenditure.
7. Obligations are not to be reported except when they are included on line 6.
8. Expenditures shall be classified under the appropriate subobject as indicated in ref (e).
9. Allotments granted to ships except hospital ships, are granted primarily to cover normal operating expenses including repairs and parts for MD equipment and are chargeable to expenditure accounts in the 13000 series. Specific attention is invited to paragraph 4(c) of ref (a).

—BuMed. H. L. PUGH

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Circular Letter 46-179 16 December 1946 (Not Restricted)

To: Naval Activities having Nurse Corps Personnel.

Subj: Transfer of Reserve Nurses to Regular Nurse Corps

Ref: (a) BuMed Circ. Ltr. 46-113.
(b) AlNavs 391-46, 465-46, 505-46, 520-46, 534-46, 563-46, 580-46 and 593-46.
(c) BuMed Circ. Ltr. 46-124.

This letter from the Chief of BuMed points out that according to reference (a) action must be taken and BuMed notified in the case of all nurses selected for transfer. Three lines of action are open, namely, (1) acceptance, (2) non-acceptance with statement of officer to that effect, and (3) appointment withheld due to present physical condition.

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Circular Letter 46-180 16 December 1946 (Not Restricted)

To: All Ships and Stations

Subj: NAVMED Form F, expedition of completion and forwarding.

Ref: (a) Pars. 236(b) and 236.4, Manual of the Medical Department.

(Not Restricted)

1. Reference (a) directs that all cases on the sick list on 31 December of each be closed out and reported on NAVMED Form F as "disposed of" by a dash indicating "CONTINUED TO NEXT YEAR" and "taken up" on the following day (1 January) by a dash indicating "REMAINING" from the last year.

2. This procedure serves two major purposes, mainly, (a) to enable statistics to be processed on an annual basis, and (b) to provide the one and only complete daily census of all patients on the sick list throughout the entire Navy.

3. The data obtained from this procedure are of extreme importance for purposes of planning present and future requirements of the Medical Department relative to various categories of patient-load.

4. In view of the urgency of obtaining these data for the purposes stated in paragraph (3), all activities are directed to expedite the completion and forwarding of NAVMED Form F "CONTINUED TO NEXT YEAR".

5. Every effort should be made to establish diagnoses on all "REMAINING" "DIAGNOSIS UNDETERMINED" (DU) cases and to forward the NAVMED Form F cards as soon after the end of the year as practicable.

--BuMed. C. A. Swanson

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Circular Letter 46-181 18 December 1946 (Not Restricted)

To: MedOfsCom, NavHosps, Continental

Subj: Christmas Radio Program Directed to Naval and Veterans' Hospitals.

This letter from the Chief of BuMed called attention to a 15-minute Christmas radio program at 12:15 E.S.T. on 24 December 1946.

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Circular Letter 46-182 18 December 1946 (Not Restricted)

To: All Naval and Marine Corps Activities, Continental United States, plus Commandants, Tenth, Fourteenth, Fifteenth and Seventeenth Naval Districts.

Subj: Annual Requisition for Care of the Dead.

(Not Restricted)

Ref: (a) Article 1841(1), NavRegs.
(b) Chapter 3, Volume II, Bureau of Supplies and Accounts Manual.

1. Preparation of Annual Requisition for Care of the Dead shall be in accordance with references (a) and (b) and this letter. Articles 23039(9) and 23037(2) of reference (b) do not apply, and these requisitions shall be forwarded to the Bureau of Medicine and Surgery for approval.

2. In the preparation of Annual Requisitions for the Care of the Dead, the following example is given as a guide. Quantities should be based on past experience in order that prospective bidders may know probable requirements. Do not use figures given in example.

EXAMPLE

ITEM NO.	ARTICLE OR SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1.	For sundry items of supplies and services, in such quantities and at such times as may be required for care of remains of deceased personnel during the fiscal year				200.00
2.	For embalming, washing, shaving, clothing, and all other necessary preparation, including placement in casket and use of suitably equipped reception room and funeral parlor	25	ea.	25.00	625.00
3.	For casket and outside box, as per specification (insert Type & Grade)	5	ea.	100.00	500.00
4.	For casket and outside box as per specification (insert Type & Grade)	15	ea.	60.00	900.00
5.	For transportation of remains to local cemetery, including hearse and one seven-passenger vehicle	5	ea.	20.00	100.00
6.	For opening and closing of grave, including necessary attendants at cemetery	5	ea.	10.00	50.00

(Not Restricted)

ITEM NO.	ARTICLE OR SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
7.	For delivery of remains to shipping point in contractor's ambulance or other closed conveyance	24	ea.	5.00	120.00
8.	For delivery of remains to shipping point in hearse, with one seven-passenger vehicle	1	ea.	15.00	15.00
9.	For care of remains shipped to (hospital or station) encased for burial; services to consist of transfer of remains from place of arrival to (hospital or station) or contractors establishment, and care of remains pending burial or reshipment, including use of suitably equipped reception room and funeral parlor	5	ea.	5.00	25.00
10.	For additional services under Item 9, consisting of reembalming and rearrangement in casket	2	ea.	25.00	50.00
11.	For additional services under Item 9, consisting of transfer of body to another casket	1	ea.	5.00	5.00
12.	For all necessary Health Department permits	30	ea.	1.00	30.00
13.	For transportation of remains to contractors establishment from points within a 100 mile radius of the (hospital or station); agreed charge per mile to be based on one-way distance	1200	mi.	.50	600.00
14.	For the engraving of metal name plate on casket, to be engraved with the name of deceased	10	ea.	2.00	20.00
				Total	2415.00

(Not Restricted)

NOTES

1. Prospective bidders are informed that as a policy, Navy standard caskets will be furnished for all bodies in lieu of the caskets specified herein.

2. All clothing required for properly dressing bodies will be furnished by the hospital or station.

3. Services to be rendered promptly upon receipt of notification, and all services rendered and material supplied to be of a kind and character satisfactory to the commanding officer. The bidder must state definitely the number of hours he will require, after receipt of notice, to begin and continue the services or to supply the material as the case may be. Expressions such as "one day" or "immediately" or "promptly" will not be accepted as responsive to the terms of this proposal.

4. It is requested that proposals be submitted to the commanding officer before award shall be made in order that investigation may be made of quality of material and character of services bidders propose to furnish. Bidders will be required to exhibit to the Commanding Officer or his representative, the finished casket, hearse, reception room, funeral parlor, etc., they propose to furnish, and give satisfactory evidence that they are prepared and equipped to furnish proper service. Unsatisfactory evidence will be sufficient reason for rejection of bids.

5. As there is no method of determining the needs of the hospital or station during the ensuing fiscal year, the quantity stated above for each item shall be understood to be estimated only for the general guidance of bidders. The estimates are based on actual requirements during the current fiscal year. The right is reserved by the hospital or station to exact more or to accept less than the quantities stated at the contract price, or to order none, as the needs of the public service may require.

SPECIFICATIONS FOR CONTRACTORS CASKETS

Shall be in accordance with (insert Title, Number and date of applicable Specification), copies of which may be obtained upon application to the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., except that Naval Activities should make application to the Supply Officer in Command, Naval Supply Depot, Bayonne, New Jersey. When requesting, refer to specification by both title and number.

3. For applicable specifications reference should be made to Index of Specifications used by the Navy Department (Navsanda Publication No. 62), issued quarterly.

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4. When the Navy standard caskets are not available, it is desired, in general, that use of contract caskets shall be as follows:

(a) For local burial or shipment within the United States when hermetical sealing is not indicated, use type and grade without inner seal.

(b) For overseas shipment, and special cases where extra protection is required or where law or transportation regulations require, use type and grade with inner seal.

5. At the Naval Hospitals or other activities beyond the continental limits of the United States, the instructions regarding use of local contract caskets will apply only when interment is to be local. All bodies to be returned to the United States shall be encased in Navy Standard caskets.

6. In preparing this requisition, the above instructions should be modified only as necessary to meet local requirements.

—BuMed. C. A. Swanson

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